Food Science and Nutrition

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The official link for this solicitation is: http://www.nifa.usda.gov/funding/rfas/sbir_rfa.html

Agency:
Department of Agriculture

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1

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Description:

The Food Science and Nutrition topic area aims to fund projects that support research focusing on developing new and improved processes, technologies, or services that address emerging food safety issues. The program will fund projects that develop novel rapid detection methods for food-borne pathogens and toxic metabolites to reduce food contamination and food-borne illnesses. The program will fund projects that increase the understanding of the characteristics of food that include: the physical, chemical and biological components of food; and improved methods for the processing and packaging of food products to improve food quality; and nutrition-related technologies and processes that will improve health and reduce obesity. The outcome of a successful project is a proof of concept for a marketable item or patented process.

The long term goals (10 years) of the program are to commercialize the production of useful new food products, processes, materials, and systems, reduce food-borne illness as well as to apply information to addresses nutrition-related issues and improve and protect the Nation’s food supply.

FY 2012 Research Priorities:

1. Developing sensor technologies for the detection of microorganisms and improved methods for rapid detection of microorganisms during post-harvest, processing, and distribution.

Examples of common food-borne pathogens:

i. Shiga toxin producing E. Coli in non-intact beef

ii. E. Coli O157:H7 associated with fruits and vegetables

iii. Noroviruses and other food-borne viruses associated with produce and seafood

iv. Salmonella and Campylobacter species associated with poultry

2. Developing innovative food processing and packaging technologies and specialty products or processes using minimally or non-thermal techniques for food preservation.

3. Developing affordable food ingredients and/or food formulations that contribute to the prevention of obesity while maintaining the sensory characteristics.

4. Developing and using interactive, information technology for nutrition educators and teachers to increase nutrition awareness and improve health and intervention strategies to address obesity among children.

Other Key Information

- **ALL ATTACHMENTS MUST BE SUBMITTED IN THE PORTABLE DOCUMENT FORMAT (PDF).**
- All Phase I applications should give the reviewing community a brief vision of where the PD expects the project to be at the end of Phase II (entering Phase III commercialization).
- Applications exceeding the budget limitation or exceeding the page limit or not meeting the formatting requirements will be excluded from NIFA review.
- The applicants are strongly encouraged to contact the National Program Leader regarding the suitability of research topics.
- Improvements of current commercial methods should address high false positive rates associated with PCR based methods for detection of food borne bacteria in produce and high false negative rates associated with immunoassays for detection of Salmonella.
- New rapid detect tests should be designed to detect at least 1 cfu/25g of food using approaches that reduce or eliminate enrichment and should be designed to allow for sampling of large volumes of food.
- Projects that promote value-added products and processes are encouraged.
- Projects that address functional foods to promote health are encouraged.
- Projects on novel screening methods for threat agents need strong letters of support from the appropriate Federal agency that will be the end user of the technology.
- Projects that focus on technologies for improving cost benefit and model-based analyses, including distribution, warehousing, and retailing systems as they relate to the economy are acceptable.
- Applicants who have received previous SBIR funding should address outcomes for those projects.

Projects should include appropriate collaborations with experts in the field of investigation i.e. a Food Chemist, Food Microbiologist, or Nutritionist as a part of the development team for the project.